

CLAIMS

Cancel claims 1 – 6 without prejudice.

7. (New) A smart panel for reducing noise over a wide bandwidth, said smart panel having an audible resonance frequency, comprising:

a board structure which generates noise in an audible frequency band;

a sound absorption member for decreasing noise generated by said board structure in an audible frequency band, said sound absorption member being attached to one face surface of said board structure; and

at least one piezoelectric unit for decreasing noise generated by said board structure when said audible resonance frequency is propagated, said piezoelectric unit being attached to an anti-nodal point of said board structure on a face surface of said board structure opposite said sound absorption member, said piezoelectric unit comprising a piezoelectric member and a tunable shunt circuit connected with said piezoelectric member for electrically resonating impedance of said piezoelectric member.

8. (New) The smart panel of claim 7 wherein said shunt circuit includes resistive and inductive components.

9. (New) The smart panel of claim 8, further comprising a plurality of said piezoelectric units each attached to anti-nodal points of said board structure on a face surface of said board structure opposite said sound absorption member.

10. (New) The smart panel of claim 7, including a pair of said board structures spaced apart by an air layer, one of said board structures having a sound absorption member on a face surface facing the other one of said board structures and each of said board structures having a piezoelectric unit for decreasing noise generated by the associated board structure when said audible resonance frequency is propagated, said piezoelectric units being attached to anti-nodal points of said board structures on face sides of said board structures opposite said sound absorption member and air layer.